AMENDMENT - UNMARKED VERSION

In the Claims:

16. (Unchanged) A system comprising:

an array of analog photocells;

a first plurality of shift cells, an output of each shift cell in the first plurality of shift cells being coupled to an input of the next shift cell in the first plurality of shift cells, each shift cell in the first plurality of shift cells being coupled to a corresponding analog photocell in the array of analog photocells;

a second plurality of shift cells, an output of each shift cell in the second plurality of shift cells being coupled to an input of the next shift cell in the second plurality of shift cells, each shift cell in the second plurality of shift cells being coupled to a corresponding shift cell in the first plurality of shift cells; and

a differential operational amplifier having at least two inputs, a first input being coupled to a terminating output of the first plurality of shift cells and a second input being coupled to a terminating output of the second plurality of shift cells.

17. (Unchanged) The system of claim 16, wherein a key frame of an image captured by the array of analog photocells is transferred from the terminating output of the second plurality of shift cells.

18. (Unchanged) The system of claim 17, wherein the key frame is transferred after the system is first initiated.

19. (Unchanged) The system of claim 16, wherein the differential operational amplifier produces difference data for the first plurality of shift cells and the second plurality of shift cells.

20. (Unchanged) The system of claim 19, wherein a set of signals provided by the differential amplifier represents a delta frame of an image captured by the array of analog photocells.

21. (Unchanged) A method comprising:

transferring a signal from each of an array of analog photocells to one storage location of a first plurality of storage locations, an output of each storage location in the first plurality of storage locations being coupled to an input of the next storage location in the first plurality of storage locations;

transferring a signal from each of the storage locations in the first plurality of storage locations to a corresponding storage location in a second plurality of storage locations, an output of each storage location in the second plurality of storage locations being coupled to an input of the next storage location in the second plurality of storage locations; and

obtaining the difference between signals obtained from a terminating output of the first plurality of storage locations and a terminating output of the second plurality of storage locations.

22. (Unchanged) The method of claim 21, further comprising transferring a key frame of an image captured by the array of analog photocells from the terminating output of the second plurality of storage locations.

23. (Unchanged) The method of claim 21, wherein the difference between signals obtained from the terminating output of the first plurality of storage locations and the terminating output of the second plurality of storage locations represents a delta frame of an image captured by the array of analog photocells.

24. (Unchanged) A system comprising:

an array of analog photocells;

a first plurality of shift cells, an output of each shift cell in the first plurality of shift cells being coupled to an input of the next shift cell in the first plurality of shift cells, each of the photocells in the array of analog photocells being coupled to a corresponding shift cell in the of the first plurality of shift cells;

a second plurality of shift cells, an output of each shift cell in the second plurality of shift cells being coupled to an input of the next shift cell in the second plurality of shift cells, a signal from a terminating output of the first plurality of shift cells being transferred to an input of a first shift cell in the second plurality of shift cells; and

a differential operational amplifier having at least two inputs, a first input of the differential operational amplifier being coupled to the terminating output of the first plurality of shift cells and a second input being coupled to a terminating output of the second plurality of shift cells.

25. (Unchanged) The system of claim 24, further comprising a regeneration amplifier having an input coupled to the terminating output of the first plurality of shift cells and having an output coupled to the input of the first shift cell of the second plurality of shift cells.

26. (Unchanged) The system of claim 25, wherein the regeneration amplifier enhances the output signal of the first plurality of shift cells.

27. (Unchanged) The system of claim 26, wherein signals obtained from the terminating output of the second plurality of shift cells represent a key frame of an image captured by the array of analog photocells.

28. (Unchanged) The system of claim 27, wherein the differential operational amplifier produces signals that are representative of the difference between signals obtained from the terminating output of the first plurality of shift cells and signal obtained from the terminating output of the second plurality of shift cells.

29. (Unchanged) The system of claim 28, wherein the signals produced by the differential operational amplifier represent a delta frame for an image captured by the array of analog photocells.

30. (Unchanged) A method comprising:

transferring a signal from each photocell in an array of analog photocells to a corresponding storage location in a first plurality of storage locations, an output of each storage location in the first plurality of storage locations

being coupled to an input of the next storage location in the first plurality of storage locations;

transferring signals from a terminating output of the first plurality of storage locations to an input of a first storage location in a second plurality of storage locations, an output of each storage location in the second plurality of storage locations being coupled to an input of the next storage location in the second plurality of storage locations;

determining the difference between signals from the terminating output of the first plurality of storage locations and signals from a terminating output of the second plurality of storage locations.

31. (Unchanged) The method of claim 30, further comprising amplifying the signals transferred from the terminating output of the first plurality of storage locations to the input of the first storage location in the second plurality of storage locations,.

32. (Unchanged) The method of claim 31, wherein signals obtained from the terminating output of the first plurality of storage locations represent a key frame of an image captured by the array of analog photocells.

33. (Unchanged) The method of claim 32, wherein determining the difference between signals from the terminating output of the first plurality of storage locations and signals from the terminating output of the second plurality of storage locations produces a delta frame for an image captured by the array of analog photocells.